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# Beyond rich and poor: Identifying global development constellations

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## Summary

**Motivation:** The COVID-19 pandemic is the most recent instance of global development problems being liable to occur anywhere, challenging the assumption of a world divided into “developed” and “developing” countries. Recent scholarship has increasingly opted for the term “global development” to capture this changing geography of development problems.

**Purpose:** Our article contributes to these debates by proposing a novel empirical approach to localize global development problems in country contexts worldwide.

**Methods and approach:** Our approach rests on a universal understanding of “development.” We identify countries that are particularly relevant for global problem-solving and consider not only the problem dimension but also countries' capacities to address these problems.

**Findings:** Our results show that countries with the most severe combinations of problems cover a range as broad as Afghanistan, Nigeria, and the United States. Two thirds of countries with above-average contributions to global problems are governed by authoritarian regimes. We also find that middle income countries, whether lower-middle or upper-middle as defined by the World Bank, have little in common apart from their income level.

**Policy implications:** Our analysis shows that traditional development concepts of a binary world order and of foreign aid as financial transfer to remedy imbalances are not enough to address constellations of global problems and capacity that have long evolved beyond rich and poor.

## KEYWORDS

environmental degradation, global development, international development, poverty, violence

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## 1 | INTRODUCTION

The COVID-19 pandemic is one of the key global crises of our time and a severe global stress test for every country in the world. All countries—even those that consider themselves advanced in terms of their economic and social development—are affected and can become global hotspots of the virus. Rich countries such as the United Kingdom (UK) or the United States (US) are centres of the pandemic, with governments struggling to find adequate political and medical solutions. Similarly, no country can end the pandemic on its own, as there is a need for global co-operation to reduce overall prevalence to a level that will make the emergence of dangerous variants less likely. It has long been argued that infectious diseases are transboundary and challenges to global public goods in themselves (Kaul, 1999). The pandemic starkly reveals the inadequacy of looking at the world from a binary perspective that juxtaposes “developed” and “developing” countries and attributes world problems to the latter (Oldekop et al., 2020).

This binary worldview has long been dominant, however. As far back as the 1950s, development theories argued that the social and economic reality among poor countries was largely homogenous—but differed drastically from that of high-income countries (HICs) (Alonso et al., 2014). As a result, development policy and development studies have predominantly focused on poor people in poor countries in the “developing world” or the “Third World” (Scholte & Söderbaum, 2016). Since the turn of the century, however, the separation of the world into “poor” and “rich,” “north” and “south,” and “donors” and “recipients” has become increasingly ill-suited to capturing the changing relationships among countries and the changing understanding of “development” (Horner & Hulme, 2017; Mawdsley, 2015; Rosling et al., 2018). Since the 1990s, and accelerating in the 2000s, much of the “developing world” has seen strong economic growth, resulting in significant changes in the geography of wealth distribution (Rodrik, 2011; Spence, 2011). As a result, we have seen convergence between the global north and global south on a number of development indicators, such as poverty, health, life expectancy, or education. Even though this has led to a reduction of inequalities between countries, relative within-country differences have increased (Horner & Hulme, 2017).

While it remains important to keep the focus of the international community on those most left behind—as in the basic-needs debate around the “bottom billion” (Collier, 2007)—there is also an emerging agreement among policy-makers and scholars that development challenges cannot exclusively be attributed to low- and middle-income countries (Gills, 2017).

The 2030 Agenda and its Sustainable Development Goals (SDGs) constitute an important turning point in this respect. Compared to the Millennium Development Goals (MDGs), which reproduced the “poor countries–rich countries” divide by focusing its goals exclusively on the former, the SDGs are universally applicable to all countries. A key defining feature of the concept of “universality” is universality in scope, meaning that all countries contribute to the achievement of all 17 SDGs (see, for example, Long, 2015). Expectations on the achievement of the SDGs take into account different national realities, capacities, and levels of development. In a similar vein, the concept of “global development” has gained increasing traction over the past years to capture the changing nature of development challenges (Horner, 2020; Horner & Hulme, 2019a, 2019b). It stands in contrast to “international development,” which “focuses on inter-state relations, often via aid, and on problems of and in the global South, [whereas] a broader global development approach should consider processes and problems that cover all countries, including those in the global North” (Oldekop et al., 2020).

This article has as its starting point the idea that existing country classifications do not adequately reflect these perspectives on universality and global development; and it contributes to the debate about the “where” of development (Horner & Hulme, 2017) in several ways. We propose an empirical approach that uses a multidimensional perspective on global development across all countries worldwide and identify problem combinations that matter for progress at the global level. By systematically taking account not only of development problems but also countries' capacities to address these problems, we propose to broaden the conceptual and empirical debate on global development. We thereby seek to resolve the tension between an equalizing approach where

“all countries are developing countries” and the recognition that governments in the global south have far fewer capabilities to reduce child mortality, prevent homicides, or address environmental degradation than governments in the global north (Horner, 2020).

An empirical assessment of global development problems in country contexts worldwide needs to consider several analytical challenges. It needs to be sufficiently universal to capture development problems and countries' capacities to address these problems across hugely heterogeneous country contexts worldwide. The measurement needs to be comprehensive in capturing a multidimensional perspective of sustainable development and a multidimensional perspective of countries' capacities to address these problems. It must reduce complexity and be simple enough to allow for relevant insights and new perspectives on the “where” of development that can inform international co-operation strategies. In addition, the measurement needs to employ indicators that allow for consistently disentangling development *problems* from the *causes* of these problems.

In this article we operationalize these considerations by focusing on three key global development challenges that have dominated the development agenda in the past two decades and that are core dimensions of the 2030 Agenda for Sustainable Development: how to fight poverty, reduce violence, and address environmental degradation. These three challenges are closely interlinked; one cannot be tackled without the other. We limit our approach to global development *problems* and do not analyse the *causes* of these problems. To address these development problems in a meaningful way, countries require a minimum level of capabilities. We therefore also assess countries' financial, administrative, and democratic capacities to cope with these challenges domestically and thus complement global problem-solving initiatives.

Using data from 2013 to 2017, we develop a Venn diagram of “problem–capacity constellations” that juxtaposes what we call “problem combinations” (the types of problems affecting a country) with “capability combinations” (the pattern of capabilities present or lacking in each country). We can thus identify countries with similar global problem burdens and with similar national capabilities. The resulting constellations constitute a snapshot on global development challenges looking back at the 2010s and reveal a new perspective on where global challenges must and can be tackled.

## 2 | EXISTING COUNTRY CLASSIFICATIONS AND THEIR LIMITATIONS

The debate on “global development” has advanced the concept itself and its application to specific development challenges (Horner, 2020; Horner & Hulme, 2017; Oldekop et al., 2020). Little progress has been made with regard to its empirical measurement. At the same time, there is a plethora of country classifications that build on more traditional development concepts that localize development challenges in the global south.

Their archetype, the World Bank classification into low-, lower-middle, upper-middle, and high-income countries remains remarkably dominant in both policy and academic circles. When the World Bank created its country-classification system, it intended to set income thresholds that allowed for the creation of a link between a country's economic and social development. The World Bank uses these categories as a basis to give better lending conditions to poorer countries. But the relationships between economic growth, poverty reduction, and other human-development indicators are not deterministic. The World Bank classification thus clusters countries that often follow very different development pathways into the same category. Moreover, the classification does not adequately reflect the nature of development challenges and the varying degrees to which the income threshold was linked to poverty reduction, structural changes, and effective institution-building (Sumner, 2012).

Despite these shortcomings, this classification not only guides World Bank lending but also other donors' policies. Moreover, academics find it difficult to use alternative classifications to distinguish poor, developing countries from countries with intermediate or high development. This direct or subliminal use of the World Bank category to derive conclusions about a country's state of development neglects the great diversity of these countries as it focuses solely on one indicator—a country's per capita gross national income.

This is not to say that there are no other country classifications beyond the World Bank's—rather the opposite. Over recent decades, country classifications have mushroomed. They present a complex web of indices and composite country classifications, such as the United Nations Development Programme's (UNDP) (2011) Human Development Index (HDI), or the United Nations' Least Developed Country classifications (LDCs); or issue-specific classifications such as the group of Small Island Developing States, Land-Locked Developing Countries, or the G7 Group of fragile states. Researchers and non-governmental organizations (NGOs) have also contributed a variety of country indices related to specific issues, such as fragile states (Haken et al., 2014) or global climate risk (Eckstein et al., 2019), or have clustered different development dimensions (Tezanos Vázquez & Sumner, 2012).

These various country classifications contribute to a better understanding of current development challenges. Yet they do not adequately capture the principle of universality and the global character of contemporary development, as they often do not include HICs. They also do not apply a comprehensive understanding of development that reflects the interlinkages of major development challenges. As outlined above, the burgeoning number of indices to classify countries are also mostly issue-specific (e.g. looking at CO<sub>2</sub> emissions, state fragility, or environmental vulnerability) and one-dimensional as they focus only on one (or two) of the global development challenges. Those approaches that do integrate multiple dimensions tend to aggregate scores onto one-dimensional indices, thus blurring crucial differentiation in the middle (Ziaja et al., 2019, p. 314). The most comprehensive tracker of global development available today is the SDG index and dashboard, which presents data on country performance towards the 17 SDGs individually and one aggregate unidimensional index (Sachs et al., 2021). While this allows efficient tracking of the SDGs, 17 dimensions are too many to allow an efficient analysis of problem constellations.

Moreover, existing classifications and indices focus on countries' development shortcomings, but do not take into account individual countries' capacities to address these. Gross domestic product (GDP) per capita allows accounting for the financial capacities and redistribution capacities of a given country to some extent (Ravallion, 2009). Yet, using GDP per capita as a universal indicator to define countries' capacities to address their own development problems neglects the extent of administrative and bureaucratic capacities needed as well as the different redistribution capacities of lower-middle income countries (LMICs) and upper-middle income countries (UMICs).

We therefore propose to include not only financial but also administrative and democratic “capacities” in the analysis. Our approach aims to conduct an assessment of both global development challenges and countries' capabilities to address these. It thus provides sufficient aggregation while maintaining the multidimensional nature of challenges and capabilities.

### 3 | THE THREE DIMENSIONS OF GLOBAL DEVELOPMENT CHALLENGES

With the signing of the 2030 Agenda and the Paris Climate Agreement, consensus has emerged within the international community that poverty, violence, and environmental sustainability are closely interlinked and that one cannot be tackled without the other. The 2030 Agenda was a major transition from previous international development agendas as it incorporated both the human development agenda of the MDGs and the environmental agenda, represented by the Rio +20 process. Moreover, with SDG16, international co-operation on peace and security was for the first time integrated into the global sustainable development agenda.

We therefore conceptualize global development as a phenomenon constituted by three dimensions: how to address poverty, violence, and environmental degradation. We consider reducing poverty, violence, and environmental degradation as a minimal baseline for global problem-solving on which virtually all policy-makers and academics can agree.

In a first step, we are interested in localizing global development challenges in country contexts. We seek to identify those countries whose burdens are particularly high. We consider countries to be substantially affected

TABLE 1 Summary statistics, problem and capacity thresholds

	Mean	Median	Std. dev.	Min.	Max.	Threshold
Under-5 deaths (absolute)	38,396	4,926	121,778	35	1,071,702	19,198
Homicide and battle deaths (absolute)	3,061	532	8,074	6	58,912	1530
Pollution-related deaths (absolute)	29,936	4,484	141,097	133	1,447,245	14,968
World share of under-5 deaths	1.00	0.13	3.17	0.001	27.91	0.5
World share of homicide and battle deaths	1.00	0.17	2.64	0.002	19.25	0.5
World share of pollution-related deaths	1.00	0.15	4.71	0.004	48.34	0.5
GDP per capita (PPP, international)	17,498	11,267	18,487	226	115,694	4,000
WGI government effectiveness	-0.11	-0.19	1.00	-2.25	2.19	0
V-Dem electoral democracy	0.53	0.54	0.25	0.02	0.92	0.6

2013–2017 country-year averages; N = 154; PPP = “purchasing power parity”.

by a global development challenge when they carry more than half of the burden of the average country. This implies the aim of substantially improving the status quo. A near consensus in the international community to pursue further progress in fighting poverty, violence, and environmental degradation justifies our choice, not least since 50% reductions have frequently been applied as goals in international agreements. Focusing on a country's burden share in global development allows us to identify those countries that are particularly important for progress at the global level. In contrast, an approach that standardized development challenges at the country level by population size would associate countries with a similar share of poor people, homicides, or environmental deaths—and not those with a similar share in the global prevalence of the problem. The *absolute* importance of such challenges may vary greatly across countries with similar relative burden shares. Nonetheless, almost all existing indices claiming to tackle global issues standardize challenge size by population, making them indices of country, not global, problems.

To reduce the complexity of measuring multiple problem dimensions and to allow for comparing development problems across all countries worldwide, we employ one common scale: the number of fatalities caused by main drivers of premature death in all three global problem dimensions. We thus count *human-made, preventable deaths* caused by poverty, violence, and environmental hazards. Fatalities do not capture an encompassing definition of development such as the quality of life that is employed by the HDI. Focusing on the most severe expression of development challenges, however, relieves us from making assumptions on compensation across more nuanced scales of development, such as education and non-lethal health issues. Fatalities constitute a common unit of measurement with an unambiguous interpretation: policy-makers across the world should aim at minimizing the number of preventable deaths over most other concerns—an assumption that is confirmed in the (largely) determined reactions to the COVID-19 pandemic.

Table 1 provides summary statistics for the three fatality indicators across 154 countries for 2013–2017.<sup>1</sup> Rationales for selecting these indicators and data sources are described in the following section. To determine the burden share accrued in one country, fatality numbers are divided by the global country average in each

<sup>1</sup>Data for all countries and information on how missing data points were treated is provided in the online appendix.

dimension. These “world share” transformations of our variables thus have a mean of 1, with the worst performing countries contributing 28 times the global average in under-five mortality (U5MR) (India), 19 times in violence (Brazil) and 48 times in environmental deaths (China). Below, we analyse each of these development challenges before assessing the intersection between the three.

### 3.1 | Poverty

Poverty reduction has been a longstanding objective of the international community and features high on international development agendas such as the MDGs and SDGs, national development plans, and development actors such as the World Bank, United Nations, or European Union. Globally, there has been significant progress in this direction. The rate of people living on less than USD 1.25 a day in “developing regions” dropped from 50% in 1990 to 14% in 2015 and MDG1 was met five years earlier than the 2015 deadline—mainly due to China's success in reducing extreme poverty levels (United Nations, [n.d.](#)). At the same time, however, around 800 million people are still living below the extreme poverty line of USD 1.90 a day and the COVID-19 pandemic is expected to exacerbate this situation. SDG1 thus aims to reduce at least by half the proportion of people of all ages living in poverty by 2030.

We measure the incidences of poverty by the number of children dying before the age of five. Poverty is a multidimensional phenomenon and is not well represented by income poverty exclusively (Lang & Lingnau, [2015](#)). Making children survive is one of the most precious human goals across cultures, but it is not universally achieved. According to a recent UNICEF ([2020](#)) report, 48 million under-fives will die between 2020 and 2030. Even among HICs, there is significant variation in child mortality, making it a valid indicator of outcome poverty. Moreover, child mortality features the best data availability among poverty indicators—much better than poverty headcounts, for example. We calculate the number of deaths of under-fives deaths by multiplying the U5MR with the birth rate and population size.<sup>2</sup> Mortality rates are estimates generated by the United Nations Inter-agency Group for Child Mortality Estimation; birth rates and population numbers are provided by the United Nations Population Division; all three indicators were obtained via the World Development Indicators (WDI) database. The global sum of under-five deaths in the period 2013–2017 was 5.9 million per year, on average.

[Figure 1](#) provides an overview of the standardized poverty burden as measured by the U5MR. Blue shades indicate problem shares of below 50%; yellow and red mark countries above that threshold. While it is no surprise to see the world's most populous countries—China and India—in the most affected category, some smaller countries with high mortality rates exhibit higher absolute numbers than much larger countries. For example, Angola reaches more than three times the number of under-five deaths than Vietnam (105,000 versus 34,000), despite having less than one third of Vietnam's population (93 million versus 28 million), at a comparable average income level. Japan and Spain record much lower absolute numbers in under-five deaths, Chad, and Sierra Leone much higher numbers than their population size would predict. [Figure A1](#) in the [online appendix](#) illustrates the imperfect correlation between under-five deaths and population ( $R^2 = .22$ ), demonstrating the value added of comparing absolute numbers of the latter on the global scale.

### 3.2 | Violence

The most basic function of the state relates to its monopoly on power and thus its ability to control the use of physical violence within its borders. Citizens' physical security may be challenged in various ways. Whereas the number of interstate conflicts and violence has declined considerably in the past few decades, many civil wars

<sup>2</sup>The equation using variable names from our source, the World Development Indicators: under-5 deaths =

$(SH.DYN.MORT / 1000) * (SP.DYN.CBRT.IN / 1000) * SP.POP.TOTL$

## Poverty: Under-5 Deaths

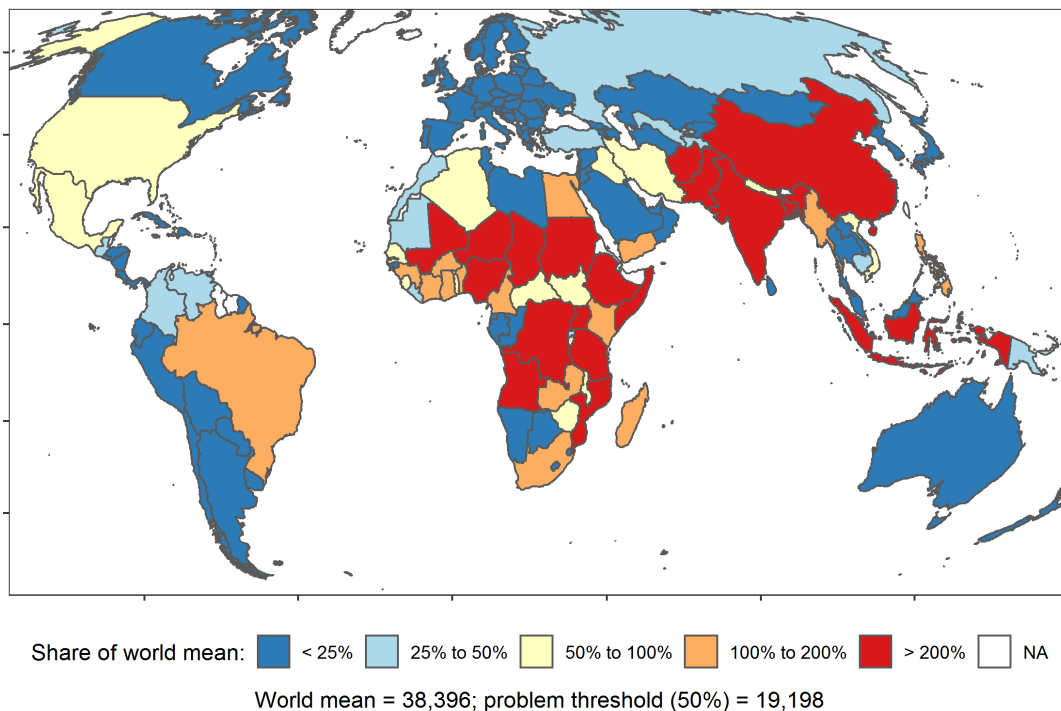


FIGURE 1 Map of global poverty burden, 2013–2017 averages

keep recurring (Hegre et al., 2017). The largest share of violent deaths, however, is generated by homicides relating to criminal networks or domestic violence (Jaffe et al., 2020). If we understand violence in these broad terms, it is not only a challenge that affects war-torn countries. Whereas civil wars are currently mostly located in Africa and the Middle East, the US and UMICs such as South Africa, Brazil, Mexico, or Colombia face serious challenges in combating homicides. Terrorist attacks, while widely reported in media, contribute only a minuscule fraction to overall violent deaths worldwide.

For this study, we measure violence as the number of deaths caused by conflict and homicides. While the drivers of violence may differ vastly across and within these two categories, the means remain fundamentally the same: physical harm with an intention to kill. The data are collected by the Uppsala Conflict Data Program (battle deaths) and the United Nations Office on Drugs and Crime (homicides); they were also obtained via the WDI (Gleditsch et al., 2002; UNODC, 2013; World Bank, n.d.). The global sum of violence deaths in the period 2013–2017 was about 470,000 per year, on average. Figure 2 demonstrates the global distribution of violence. Small countries such as El Salvador can have very high incidences of violence, while much larger countries such as Japan or Indonesia remain below the threshold. Figure A2 in the online appendix shows how little violence deaths are linked to population size ( $R^2 = .07$ ).

### 3.3 | Environment

Preventing further environmental degradation and staying within the planetary boundaries is the third epochal challenge facing the international community. Environmental degradation has many facets, but air-borne pollutants stand out in terms of their impact on climate change and on individual health. In fact, climate change and air pollution are closely related as climate change can affect air quality and air pollution can affect climate change.



## Violence: Homicide And Battle Deaths

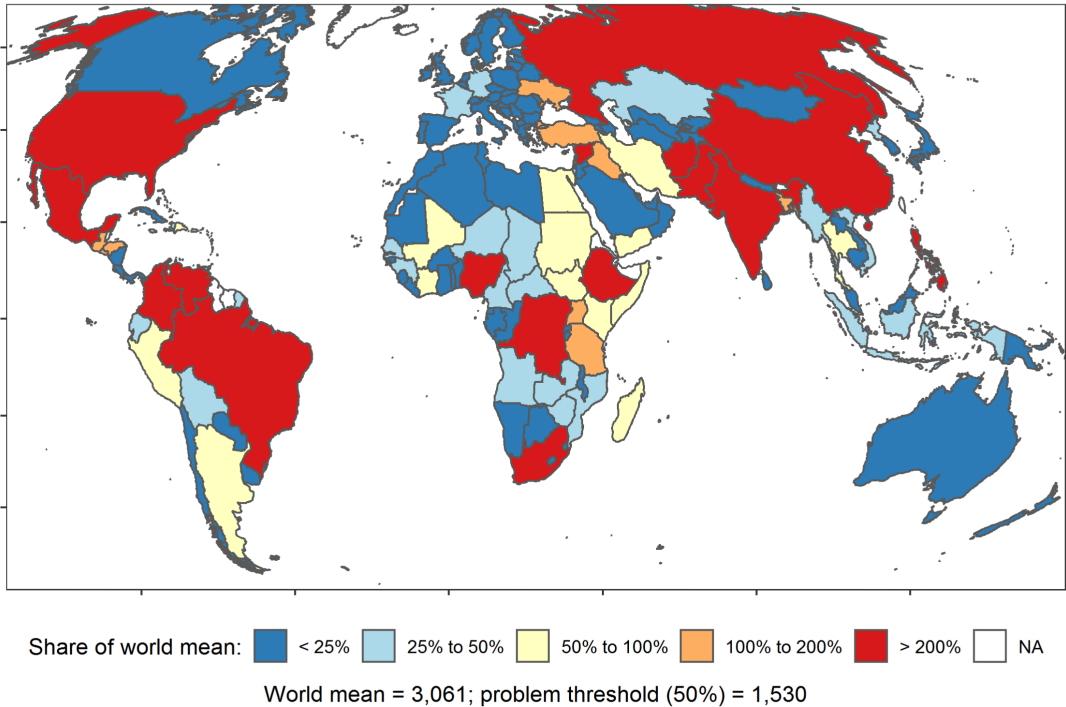


FIGURE 2 Map of global violence burden, 2013–2017 averages

The main cause of CO<sub>2</sub> emissions is also a key source of air pollution (burning and extracting fossil fuels). In addition to CO<sub>2</sub>, two of the most frequently emitted substances (black carbon and methane) are also among the top contributors to global heating, with direct and indirect human health impacts, contributing to air pollution-related premature deaths (Ramanathan & Feng, 2009). There is a large body of literature that examines how air pollution, climate change, and other meteorological factors negatively influence health, wellbeing, and mortality (Afroz et al., 2003; Manisalidis et al., 2020; Simpson et al., 2005).

Air pollution affects people across the globe, both in industrialized and in non-industrialized countries. In 2016, 91% of the world population was living in places where the World Health Organization (WHO) guidelines on air quality levels were not met. As a result, ambient (outdoor) air pollution was estimated to cause 4.6 million premature deaths globally in 2015, mostly related to strokes, heart disease, and lung cancer (Lelieveld et al., 2018).

We thus proxy the number of fatalities related to human-caused ecological degradation with fatalities caused by ambient air pollution. This is not to say that there are no other ways by which environmental degradation induces fatalities, but they currently constitute less suitable proxies.<sup>3</sup> The data is drawn from a recent study by Lelieveld et al. (2018) who estimate the number of deaths building on an atmospheric circulation model and health statistics from WHO. Figure 3 provides an overview of the geographical distribution of this environmental burden. Unlike poverty and violence, above-average pollution-related damage also affects larger European countries such as Germany and Italy. Figure A2 in the online appendix shows that the link

<sup>3</sup>For example, as climate change is accelerating, more people are affected by extreme weather events and conditions such as heat waves, droughts, floods, or storms. Almost 500,000 people have died globally since 2000 as a result of extreme weather events (Eckstein et al., 2019). While these numbers are expected to grow substantially, deaths related to climate change are currently difficult to measure.

Environment: Pollution-Related Deaths

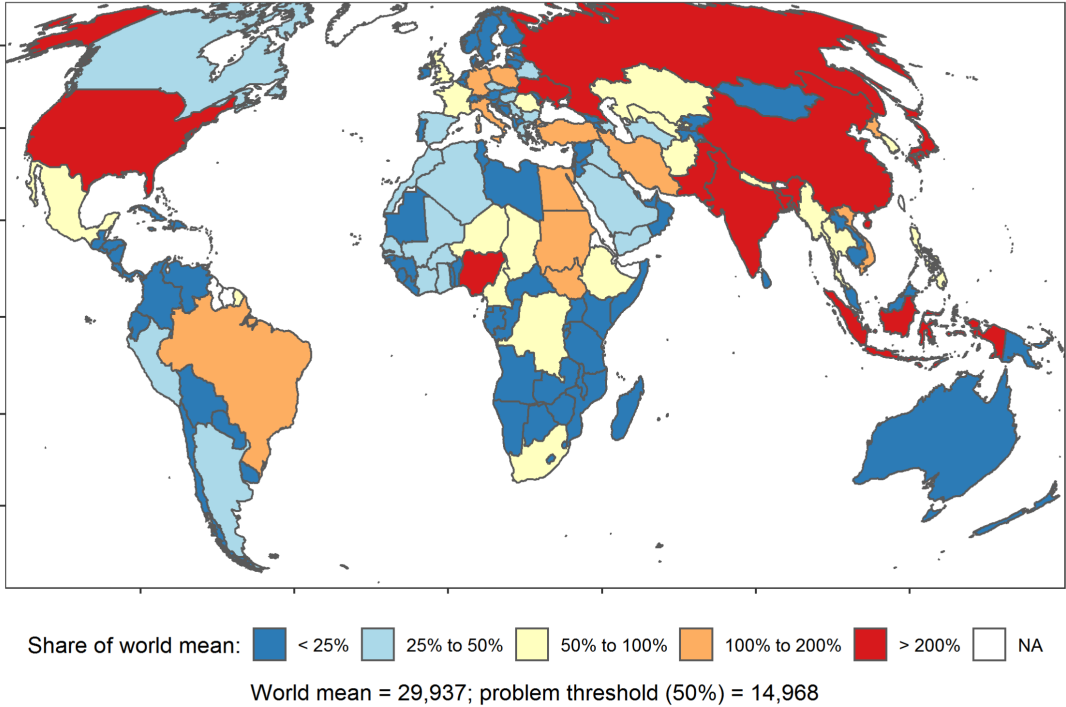


FIGURE 3 Map of global environment burden, 2013–2017 averages

between air-pollution-related deaths and population is stronger than for the other problem dimensions ( $R^2 = .72$ ). Nonetheless, there are remarkable outliers towards more fatalities than expected from population size (e.g. South Sudan, Serbia) and towards fewer fatalities (e.g. Costa Rica, Madagascar). Pollution-related fatalities, as with poverty and violence fatalities, are context- and policy-dependent and not entirely determined by population size.

3.4 | Problem combinations

For addressing global development problems, it is of interest to know not only where individual challenges occur, but also the country contexts in which burdens accumulate. Figure 4 brings the three development challenges together. The upper-right quadrant shows countries that suffer from more than half the global mean in violence and poverty deaths. Countries that experience more than half the global average in environmental deaths are depicted as a solid dot. To make the figure more readable, only countries with more than 20 million inhabitants (the average population per country in our sample) in the upper-right or lower-left quadrants are labelled.

It is little surprise that the two largest countries that are not members of the Organisation for Economic Co-operation and Development (OECD), India and China, are among the countries affected disproportionately by all global development challenges. However, some much smaller countries perform so poorly that they enter the club of countries challenged thrice, including Afghanistan, South Africa, and South Sudan (not labelled). Countries that do not carry any global burden comprise HICs such as Australia and Spain. We also see surprising entries: Morocco and Rwanda (not labelled) just barely pass the poverty criterion, while Malaysia is located comfortably among similarly sized OECD countries.

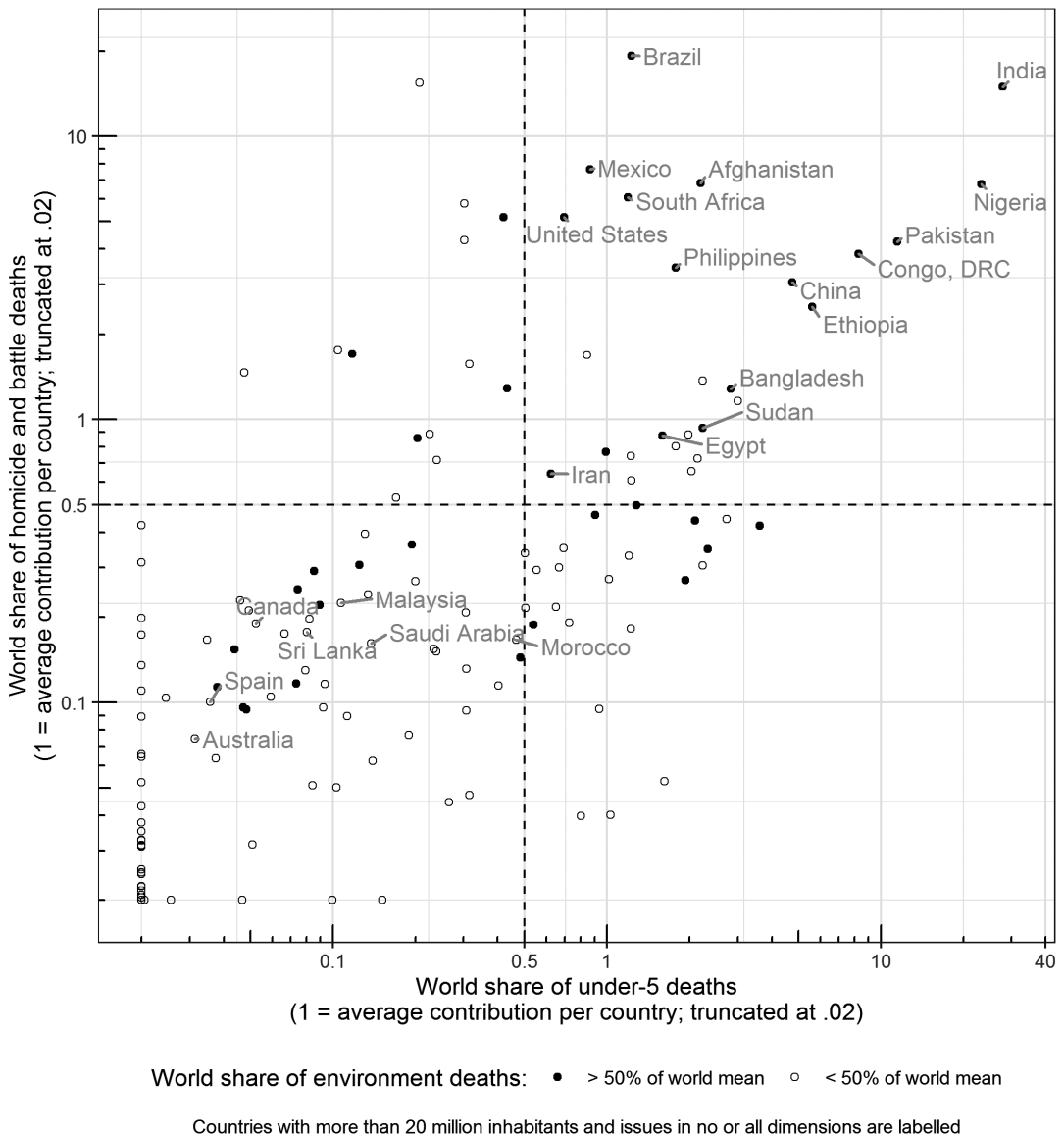


FIGURE 4 Problem combinations based on shares in poverty, violence, and environment, 2013–2017 averages

#### 4 | THE THREE DIMENSIONS OF COUNTRY CAPACITIES

Debates on the concept of global development highlight the risk that the idea of universality—“we are all developing countries”—obscures the fact that countries have very different capabilities to deal with their development challenges (Horner, 2020). In addition to a country’s share in global development problems, we therefore analyse countries’ capacities to deal with development challenges and prevent fatalities. We propose to conceptualize *country capacities* as financial, administrative, and democratic capacities. In contrast to countries’ share in global development problems, we define countries’ capacities in relative terms and rely on theory to justify our thresholds. We do not imply that national capacities are sufficient to address countries’ development challenges as global development problems in an interconnected world can often be addressed only transnationally (Horner, 2020). However, we assume that a minimum level of country capacities is a necessary condition for dealing with global development problems.

Financial Capacity: GDP Per Capita (PPP, International \$)

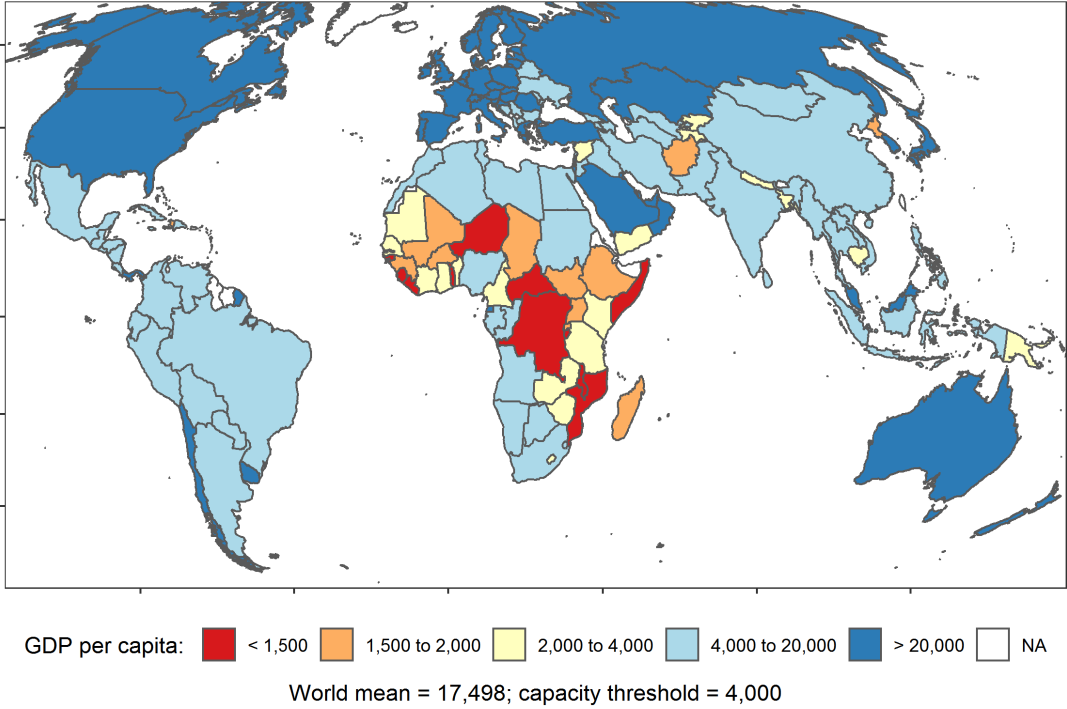


FIGURE 5 Map of countries' financial capacities, 2013–2017

4.1 | Financial capacity

A country's financial capacity refers to its access to financial resources that can be used to address the above-mentioned development challenges—reduce poverty, guarantee state authority, or address environmental degradation.

We use GDP per capita to proxy a country's financial capacity. The GDP—the monetary value of all finished goods and services within a country—gives an initial indication of the financial resources on which a government can rely to address key development challenges. As only resources that go beyond the subsistence of the population can be employed for redistribution, the GDP needs to be standardized by population size. Data on GDP per capita is provided by the World Bank's International Comparison Program via the WDI. To proxy the ability of financial resources to buy leverage in the respective country, we use a GDP series converted to international dollars using purchasing power parity (PPP) rates. As threshold between low and high financial capacity, we opt for USD 4,000—approximately the dividing line between LMICs and UMICs as defined by the World Bank.

Figure 5 demonstrates the global distribution of financial capacities. It shows that outside the African continent, very few countries lack financial resources to fight global challenges, these include Haiti, Nepal, and Papua New Guinea.

4.2 | Administrative capacity

When funds for addressing global challenges are available, there is a need for a functioning public administration to employ and allocate them effectively. Financial capacity must therefore be complemented by capable bureaucracies which know how to implement policies geared towards poverty reduction, the promotion of environmental sustainability, or maintaining a monopoly of violence.

Compliance research has argued that human, administrative, and financial capacities are one key factor to explain variation across countries in their compliance with international rules and norms (Brown Weiss & Jacobson, 1998). Development research has also shown that state institutions and administrative capacities are decisive for promoting sustainable development and for the effectiveness of development aid (Andrews, 2013; de Haan & Warmerdam, 2016; Kaufmann et al., 2003). The management and performance of the administration, the regulatory framework of the state, sound financial management institutions, and a functioning civil service all contribute to the state's capacity to design and implement development-oriented policies.

We measure administrative capacity with the Worldwide Governance Indicators (WGI) government effectiveness score (Kaufmann & Kraay, n.d.). This score is a meta index comprised of a multitude of expert assessments and surveys and aims at capturing "perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies" (Kaufmann et al. 2010, p. 4). The scores are scaled to a global mean of zero and a standard deviation of 1, which makes it hard to interpret any scale level with respect to an apprehensible description of realized administrative performance. In the absence of a more convincing threshold, we opt for zero to distinguish high and low administrative performance.

Figure 6 uncovers a band of lacking administrative capacity that spans from Latin America via Africa to Central Asia. Some countries in Southern Africa, on the Arabian Peninsula, and in Southeast and East Asia join OECD countries in the mid- to high-capacity categories.

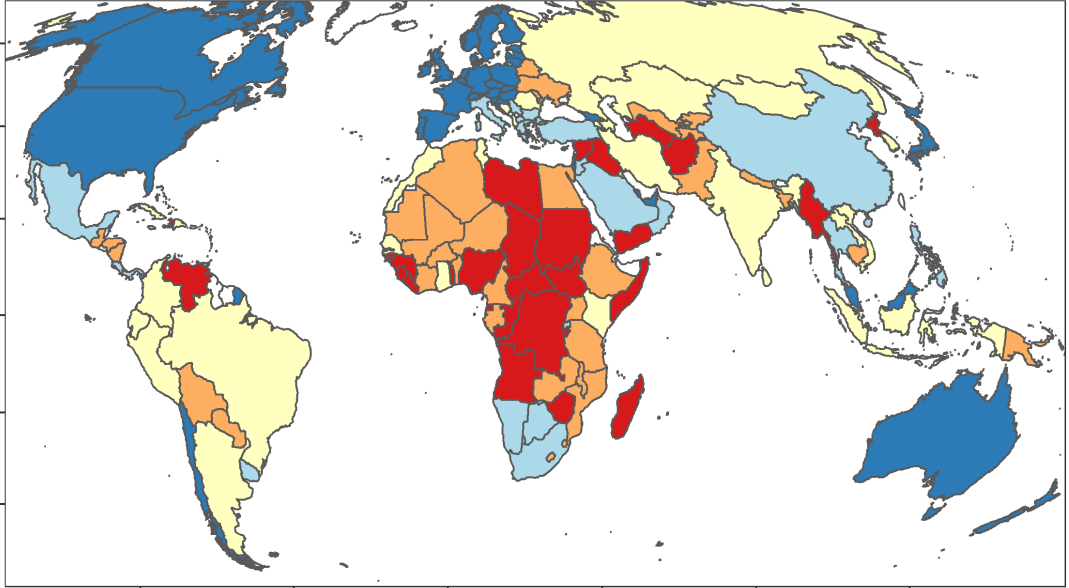
### 4.3 | Democratic capacity

Even if countries have the financial and institutional capacities to implement development-oriented policies, governments may not have strong political will to use these capacities to promote citizens' wellbeing, address poverty and state fragility, or promote environmental sustainability.

Research on the effectiveness of development aid has prominently argued that "ownership" of the recipient country, in other words the political will of the partner government to engage in development-oriented reforms, substantially shapes the impact of external support (Andrews, 2013; Fraser & Whitfield, 2009). Insights from institutional economics and comparative politics reveal that the level of inclusiveness of domestic institutions is a key factor in explaining why some governments develop and implement public-goods-oriented policies and others not (Acemoglu & Robinson, 2012; Bueno de Mesquita et al., 2003). In short, more inclusive political institutions create incentives for political leaders to design development-oriented policies that benefit the people, thereby increasing the leaders' chances to stay in power. Indeed, many studies show that democratic countries provide more public goods compared to authoritarian regimes (Bollyky et al., 2019; Gerring et al., 2020). Autocracies may at times provide growth in the short run, but the fundamental commitment towards development can only be guaranteed in regimes that constrain leaders and allow for a peaceful transfer of power (Acemoglu & Robinson, 2012). We thus label this capacity dimension "democratic" capacity.

We measure democratic capacity with the electoral democracy index developed by the Varieties of Democracy Project (V-Dem) (Coppedge et al., 2020). The index represents a narrow definition of democracy inspired by Robert Dahl and includes freedom of association, suffrage, free and fair elections, an elected executive, and freedom of expression. Lührmann et al. (2018, pp. 63–64) argue for a threshold of 0.5 on the electoral democracy index to distinguish autocratic from democratic systems, as—on average—more democratic than autocratic features are present at this score. Countries that are just above this threshold include, in the period 2013–2017, evidently imperfect democracies such as Lebanon, Sri Lanka, and Tanzania. We consider including these countries into the category "democratically capable" as too generous. We thus opt for a more conservative threshold of 0.6. Figure 7 shows that the level of democratic capacities varies considerably across LICs, LMICs, and UMICs. Within this group, some are classified as democracies (Botswana, Ghana, or Mauritius), but most are categorized as authoritarian regimes.

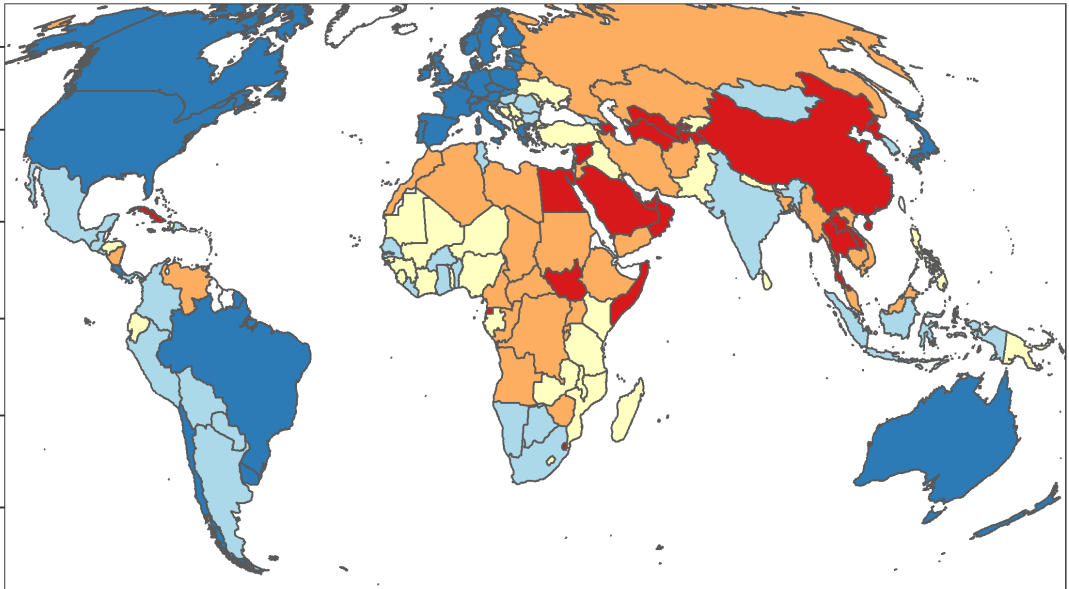
Administrative Capacity: WGI Government Effectiveness



WGI government effectiveness score: ■ < -1 ■ -1 to -0.5 ■ -0.5 to 0 ■ 0 to .5 ■ > .5  NA  
World mean = -0.11; capacity threshold = 0

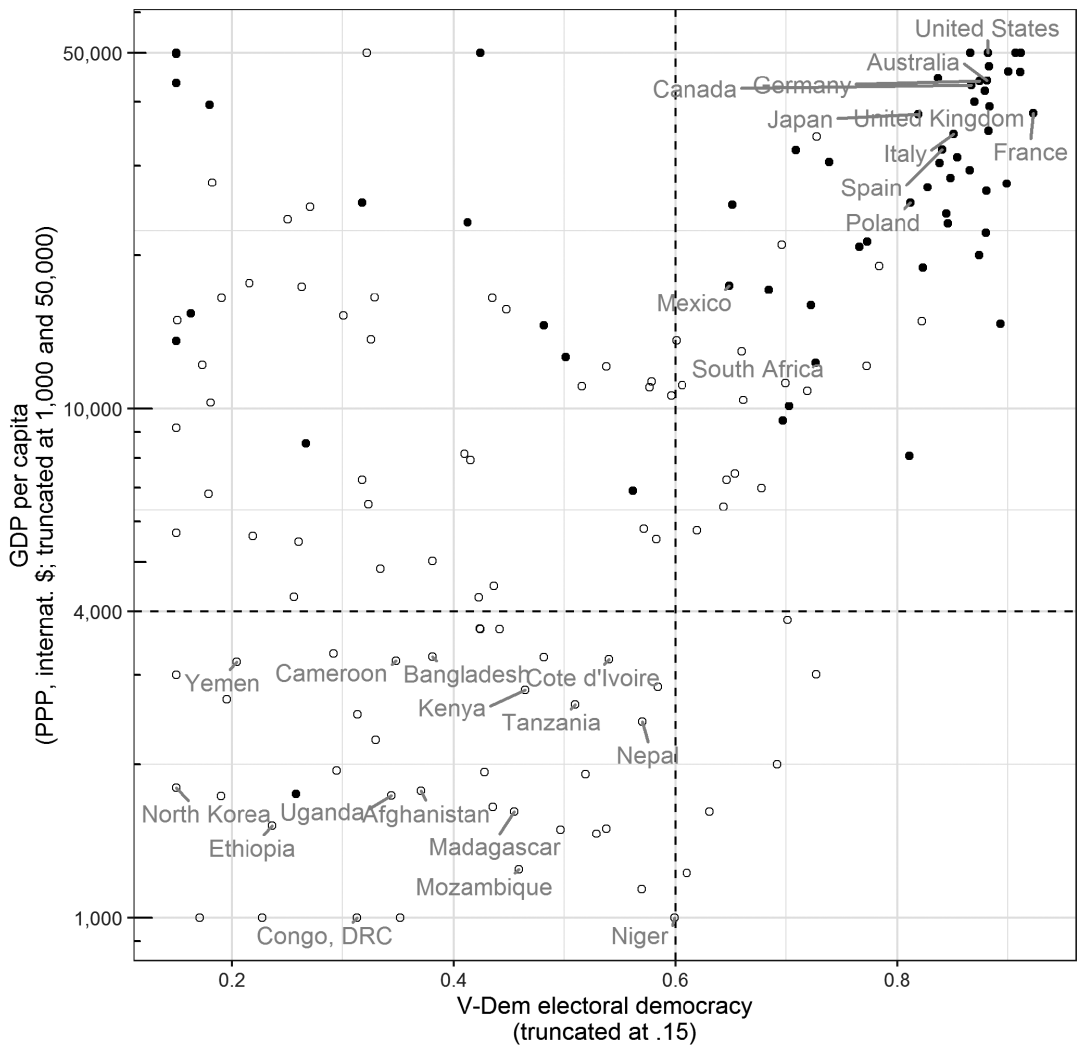
FIGURE 6 Map of countries' administrative capacities, 2013-2017

Democratic Capacity: V-Dem Electoral Democracy



V-Dem electoral democracy score: ■ < 0.2 ■ 0.2 to 0.4 ■ 0.4 to 0.6 ■ 0.6 to 0.8 ■ > 0.8  NA  
World mean = 0.53; capacity threshold = 0.6

FIGURE 7 Map of countries' democratic capacities



WGI government effectiveness score (threshold = 0): • above ○ below

Countries with more than 20 million inhabitants and all or no capacity issues are labelled

FIGURE 8 Capacity combinations based on financial, administrative, and democratic performance, 2013–2017

#### 4.4 | Capacity combinations

Just as global development problems often occur jointly, so do capacities (or a lack thereof). Figure 8 depicts countries that have financial capacity in the upper quadrants, countries with democratic capacity in the right-hand quadrants, and countries with administrative capacity as solid dots. It shows that, among countries with more than 20 million inhabitants, only OECD countries and South Africa feature all three capacities in the period 2013–2017 (labelled solid circles in the upper-right quadrant). Low capacity in all three dimensions mostly occurs in African and some Asian countries. Also note the densely populated upper-left quadrant, which comprises financially capable countries that lack democratic capacity (many Middle Eastern states). The constellation of the lower-right quadrant—democratic capacity in the absence of financial resources—is hardly ever realized, and only occurs in Western Africa (Benin, Burkina Faso, Ghana, Liberia, and Senegal; not

labelled). Note that only one country below the USD 4,000 line has above-average administrative capacity (Rwanda; solid dot, not labelled).

## 5 | PROBLEM-CAPACITY CONSTELLATIONS

Do countries that are severely affected by one or more global development problems have the capacities to counteract them? A few examples mentioned so far and previous discussions about global development problems would lead us to expect that this is not always the case. But a comprehensive picture requires more systematic approaches, presented here in the form of a Venn diagram (Figure 9). The three circles enclose all countries that carry more than half the average burden in worldwide poverty, violence, and environment deaths, respectively. Countries that carry less than half of the burden of the average country are listed at the bottom of the Venn diagram, below the circles. Each country name is preceded by a set of symbols representing whether a capacity is present (solid) or missing (hollow). These symbols represent the three capacities from left to right: financial, administrative, democratic.

Several interesting patterns emerge when we focus mainly on the problem or on the capacity combinations, when we look at established country groups such as the BRICS (Brazil, Russia, India, China, and South Africa) or LMICs and UMICs, and when we investigate region-specific aspects. We highlight five relevant constellations.

### 5.1 | Hotspots of global development problems: Highly heterogeneous capacity combinations

The group of countries that face high problem shares on all three dimensions (core panel in Figure 9) is a surprisingly diverse mix across all income groups and continents. It includes conflict-affected low-income countries (LICs)—e.g. Afghanistan, the Democratic Republic of the Congo (DRC), South Sudan—lower-middle income countries (LMICs)—e.g. Nigeria, Philippines—and most of the BRICS countries—Brazil, China, India, South Africa. It even includes two OECD countries: the US and Mexico. This clearly demonstrates that development problems such as poverty, violence, and environmental fatalities are widely distributed and not only attributable to LICs.

Although countries in the middle circle are affected by similar problem shares, they differ widely regarding their capacities. Afghanistan, Bangladesh, DRC, Ethiopia, and South Sudan lack capacities on all three dimensions and clearly need to be the focus of the international community. Most of them have received considerable volumes of development assistance and have a history of working with international donors. Countries such as Egypt, Iran, Nigeria, Sudan, or Pakistan have the financial means to address development challenges, but weak administrative capacities and a democratic deficit. Countries such as China and the Philippines first and foremost lack democratic capacities, whereas during our period of investigation Brazil and India lack only administrative capacities.<sup>4</sup> The US and Mexico are strong on all three capacity dimensions, and the US, especially, as a global superpower, should be in a position to address its domestic challenges.

### 5.2 | The global poor

The left circle depicts countries with considerable poverty challenges. Its outer segment assembles countries that mainly face poverty challenges. Except for Haiti, these are all located in Africa; most have very limited capacities. In addition, some countries with poverty challenges and no or limited capacities have to deal with violence or

<sup>4</sup>Recent deterioration in democratic capacity may bring both these major global players into the same constellation as Egypt and Pakistan in the near future.



**LEGEND: CAPACITIES**

- present
- missing

financial  
administrative  
democratic

Countries with more than 100 million inhabitants are printed in **bold**.

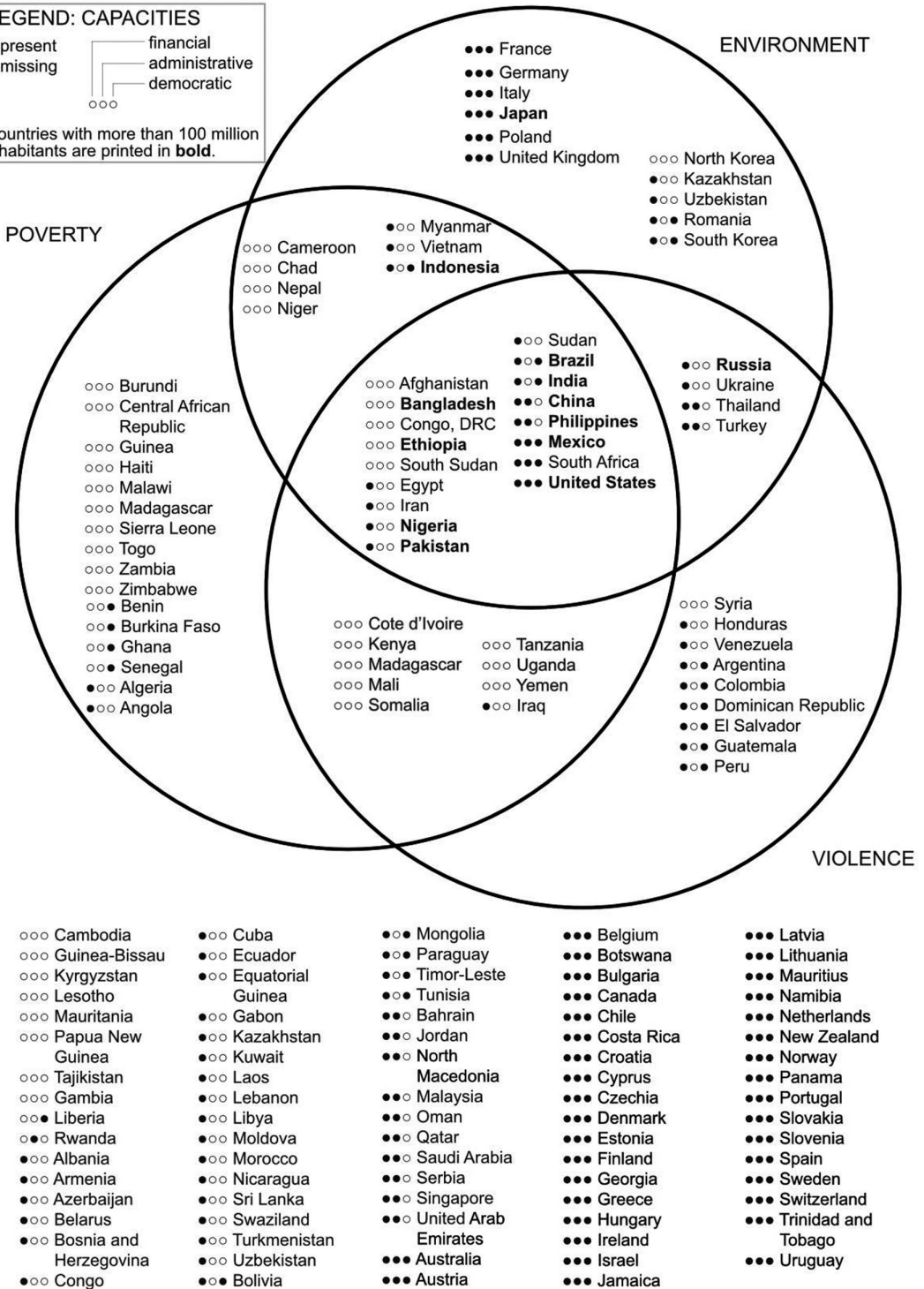


FIGURE 9 A Venn diagram of global problem–capacity constellations, 2013–2017

environmental challenges at the same time. In both clusters where poverty overlaps with environment or with violence problems, most countries lack capacities and most are again located in Africa.

Our findings add to debates on where poverty is located. Previous research highlighted the poverty problem of the “bottom billion” countries (mostly fragile countries with stagnating economic growth) (Collier, 2007). Other studies showed that throughout the 2000s, poverty has been concentrated in populous MICs (Sumner, 2012). Our research shows that absolute poverty is by no means restricted to LICs or LMICs/UMICs. Most countries with high poverty incidences are African countries with very limited capacities. But when using the U5MR as the proxy indicator, poverty is clearly not an issue for “poor countries” only. Applying our more direct approach that does not require assumptions about poverty thresholds and purchasing power as income poverty does, several “rich” and “emerging” countries also contribute to the global problem. The US, for instance, made headlines as a badly performing country among rich democracies (Mangan, 2018).

### 5.3 | Country capacities: The problem of authoritarianism

Focusing mainly on capacity problems reveals three typical constellations. Many countries are weak on all three capacity dimensions. This includes more than one third of all countries that contribute to global problems on one or several dimensions (29 out of 75 countries). A second—much smaller—group of countries contributes to world problems but has strong capacities on all three dimensions. This includes the US, South Africa, Mexico, and some OECD countries (France, Germany, Japan, etc.). A third group of countries has problems mainly related to democratic capacities. In some cases, these are combined with problems related to the government's effectiveness. Put differently, constellations where countries are democratic but face financial or administrative problems rarely occur (only Benin, Burkina Faso, Ghana, and Senegal). No country has only financial capacity issues.

This observation implies that beyond a group of countries that has very limited capacities across the board, the main challenge in tackling global problems is the widespread presence of authoritarianism. Two thirds of the countries with global problems in our Venn diagram are authoritarian regimes (51 out of 75). This is largely in line with previous research that has highlighted the authoritarian turn in international politics (Lührmann & Lindberg, 2019). This observation is also consistent with research that has demonstrated that democracies provide more public goods compared to authoritarian regimes with similar income levels (Bollyky et al., 2019; Bueno de Mesquita et al., 2003; Gerring et al., 2020). Democracies have lower infant mortality rates than authoritarian regimes (McGuire, 2013).

### 5.4 | Challenged BRICS, diverse MICs

Most BRICS countries have problems on all three dimensions (Russia at the time of writing had problems related to environment and violence only). This is facilitated by their large populations, but is not inevitable. BRICS countries all have financial capacities; China and Russia lack democratic capacity; Brazil, India, and Russia lack administrative capacity; during our period of investigation only South Africa had no capacity issues. Our assessment thus echoes academic and policy debates that BRICS countries remain key actors in solving global development problems. Yet, their varying levels of capacities and domestic challenges suggests that co-operation strategies need to differ considerably across these countries.

Such diversity in constellations occurs beyond the BRICS. Our problem assessment confirms previous findings of substantial heterogeneity among LMICs and UMICs which are dispersed across all problem and capacity constellations. UMICs appear across all three problem dimensions and do not form a homogenous group either in terms of their development challenges or in terms of their capacities. The only issue they have in common is what defines this group—their financial capacities.

## 5.5 | Regional perspectives: Africa, Asia, Europe, and Latin America—same, same but different

African countries mostly appear in country groupings where poverty is a key concern—sometimes combined with violence and environmental challenges. In fact, the “poverty only” cluster comprises exclusively African countries. Most African states lack capacities on all three dimensions. Some African states have sufficient financial means but lack administrative and democratic capacities (e.g. Angola, Algeria, Egypt, Nigeria, and Sudan). Botswana, Mauritius, and Namibia have domestic means to address their development challenges and indeed appear outside the problem circles together with most OECD countries.

Most Latin American countries are clustered in the violence-only sphere. Only Mexico and Brazil face challenges on all three problem dimensions. Haiti is the only Latin American country that contributes significantly to global poverty and has no capacities. Many lack administrative capacity; financial and democratic capacities are not a major concern. Note that our indicator of financial capacity measures the potential for redistribution, not actual efforts to reduce inequality. In this aspect, Latin American countries fare abysmally. As our analysis is a snapshot for 2013–2017, it does not account for recent autocratization trends in Brazil or Bolivia.

Asian countries are spread across many problem and capacity constellations. They appear among those countries with problems on all three dimensions and without any capacities (Afghanistan, Bangladesh). They are also among those that “only” have to deal with environmental casualties (South Korea, Uzbekistan) or with environment and violence challenges (Thailand). Interestingly, no Asian country except Japan has strong capacities on all three dimensions. Whereas African and Latin American countries also appear among OECD countries at the bottom right of the Venn diagram (full capacities, outside the problem circles)—no Asian country features there. This is probably related to the fact that authoritarianism is widespread in Asia and those countries that are strong with regard to GDP per capita and government effectiveness still face accountability problems.

Some European countries are clustered together with other rich and capable OECD countries (France, Germany, Italy, Japan, Poland, and the UK). In these countries environmental deaths were the only prevalent problem in the period 2013–2017. They command considerable domestic capacities with the potential to curb pollution-related deaths, but have largely abstained from introducing stricter regulation on emissions. At the same time, environmental hazards such as air pollution do not stop at international borders and require transnational and global co-operation. Here, too, some of the most affected countries are also the most influential in international forums and could shape global co-operation efforts.

## 6 | CONCLUSIONS

This article presents an empirical approach that uses a multidimensional perspective to locate global development in country contexts across the world. Our results challenge widely shared perceptions about the “where” of development problems. First, we find that countries with problems on all three dimensions—poverty, violence, and environmental degradation—are highly heterogeneous, comprising, for example, both Afghanistan and the US. Countries that struggle with both poverty and violence are mainly on the African continent, whereas the group of countries that is not poor but contributes disproportionately to the global violence problem includes G20-countries such as Argentina, Russia, or Turkey. Countries with most fatalities related to air pollution are as diverse as Germany, Kazakhstan, and North Korea. Locating global development challenges, however, is only one part of our analysis.

By including country capacities, our approach proposes a strategy that acknowledges the “universality” of global challenges while clarifying that countries dispose of very different capabilities to address these problems. By focusing not only on development problems, but also on countries' capacities to address these problems, we propose to broaden the conceptual and empirical debate on global development. Addressing poverty, violence,

and environmental degradation requires a fresh look at where these problems occur but also a discussion about the necessary capacities and means to address these. The most prevalent categorization of countries used in policy and academic circles remains the World Bank classification of low-income, lower- and upper-middle income, and high-income countries. This categorization directly and indirectly implies that LMICs, UMICs, and HICs have greater capabilities to address their development challenges on their own. By adding administrative and democratic capacities, our results reveal much larger heterogeneity among the so-called LMICs/UMICs and severe weaknesses regarding administrative and democratic capacities.

While our empirical approach considers all countries beyond their income status ("all countries are developing countries") it also allows us to identify the global hotspots of development challenges and the need for a more targeted approach to address these. Looking at the inner circle of our Venn diagram, it becomes clear that Afghanistan, Bangladesh, DRC, Ethiopia, and South Sudan need to be the focus of the international community. In addition, the diversity within the group of countries with problems on all three dimensions raises the question of national and international responsibilities, and the degree to which those problems need to be tackled jointly by the international community. Countries such as the US are not used to having other countries engage in their domestic policies. Countries such as India, Brazil, or China are no longer open to co-operating with OECD countries in donor-recipient relationships. Yet, as global problem-solving urgently requires the contribution of all countries in the inner circle, new forms of international co-operation need to be sought that include the gamut of LICs, LMICs, UMICs, and HICs.

Going beyond the inner circle of our Venn diagram and looking at poverty, violence, and environment individually, it becomes clear that a stronger focus on capacities is also vital in addressing these challenges.

Take poverty, for instance. Countries challenged predominantly by poverty are mostly African. Many of these countries face capacity constraints on all three dimensions, pointing to the need for cross-cutting, multi-level international support. This is even more so as no country lacks financial capacity only. This implies that aid in the form of financial support alone will have little traction. Financial support must be leveraged to strengthen administrations and encourage democratic governance.

Violence is a different story. Most of the violence-ridden countries are Latin American with weak administrative capacity. The best bet for these countries to escape the violence trap is strengthening the delivery of public services to delegitimize violent resistance against the state.

The environmental problem, in turn, will not be solved without the active engagement of the G7 and G20 countries. Our analysis shows that these countries are not just the big CO<sub>2</sub> emitters but also the hotspots for air pollution and related deaths. While these countries (most of them highly capable) need to take on responsibility for improving their domestic situation, they also carry international responsibility as laid out in the Paris Agreement on Climate Change. Advancing the climate talks within the United Nations Framework Convention on Climate Change (UNFCCC), with a strong focus on reducing emissions and air pollution, remains key. In addition, there is a need for progress in supporting those countries that due to their geographical location, climatic conditions, and limited financial and institutional capacities are most susceptible to the impacts of climate change.

The 2030 Agenda has made a substantial contribution towards better capturing the universal scope of global challenges and highlighting the fact that all countries have to contribute to solving these. While the principle of universality is a key step forward to better understanding global development, it fails to acknowledge that some countries need to contribute more to global problem-solving than others. Identifying these hotspots is a key contribution of our article.

Another key challenge to the 2030 Agenda is to reach beyond the development and environment communities, both in policy and academic circles. Despite its scope and ambition to manifest a "silo-breaking" agenda, the foreign policy, trade and investment, finance, and defence departments or ministries have so far not fully signed up to the agenda. Yet, looking at our Venn diagram, it becomes clear that addressing poverty, violence, and environmental degradation can only be solved with coherent "whole-of-government" approaches both domestically

and in country's external policies. Put differently, without making progress in the countries identified in our Venn diagram, and without pulling different policy domains together for that purpose, the achievement of the 2030 Agenda will remain difficult to achieve.

With regard to future research, our article opens several avenues. Researching global development requires distinguishing between where global problems occur from the factors that cause these problems. We opted for localizing global development problems without addressing their root causes. While air pollution, for instance, can be more easily attributed to the sites and economies where they occur, poverty and violence are often the result of multi-faceted national and international interlinkages and interdependencies. Future research and empirical measurement of global development could aim at better capturing the causes and drivers of global development challenges with a multidimensional approach.

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## DATA AVAILABILITY STATEMENT

Replication data will be made available upon request to the authors.

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## SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

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